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09/854,491	05/15/2001	Thomas Sean Houlihan	550-229	7919

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EXAMINER

PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/854,491

**Applicant(s)**

HOULIHANE ET AL.

**Examiner**

Jason Proctor

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Claims 1-34 have been rejected.

#### *Drawings*

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR § 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR § 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show numerous elements described in the specification. For example, the drawings fail to show "user defined rules 12" as described in the specification (page 6, line 32 – page 7, line 1). The drawings fail to show "data file 28" as described in the specification (page 7, lines 13-14). The drawings fail to show "test bench model rules 22" as described in the specification (page 8, lines 8-9). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR § 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: All reference characters in Fig. 7. Corrected drawing sheets in compliance with 37 CFR § 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR § 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

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corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to because numerous details are illegible. See 37 CFR § 1.84(p)(1). Corrected drawing sheets in compliance with 37 CFR § 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR § 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

6. The abstract of the disclosure is objected to because the title "Abstract of the Disclosure" is misspelled. The abstract of the disclosure is also objected to for the line "[Figure 3.].". Correction is required. See MPEP § 608.01(b).

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7. The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required. Pages 11-16 have improper line spacing. Appropriate correction is required.
8. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Objections***

9. Claims 1, 17, 19, 21, and 32 are objected to under 37 CFR § 1.75(i), as putting forth a plurality of elements or steps without separating each element or step of the claim by a line indentation.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the second paragraph of 35 U.S.C. §112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-17, 28-30 and 34 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Regarding claims 1 and 17, the phrase "may be" renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are essential steps of the invention. See MPEP § 2173.05.

13. Regarding claims 12 and 28, the phrase "may be" renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are essential to the invention. See MPEP § 2173.05.

14. Claim 6 recites the limitation "output signal" in line 5. There is improper antecedent basis for this limitation in the claim. It is unclear whether "output signal" in line 5 refers to the "strobe output signal" of line 2 or "at least one strobed output signal" of line 3.

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15. Claim 15 recites the limitation "sampling points for that output signal" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1, on which claim 15 depends, makes no reference to "sampling points".

16. Regarding claim 34, it is unclear what is meant by "a reduced hardware model synthesised from said reduced model". It is unclear how a "reduced hardware model" differs from the reduced model of claim 1 which is a model of one or more surrounding circuits. Presumably the reduced model of claim 1, being a reduced model of hardware, constitutes a "reduced hardware model". It is unclear whether a "reduced hardware model" is tangible or rather nonfunctional descriptive material. It is unclear what constitutes "synthesising" a reduced hardware model from a reduced model.

17. Claims not specifically mentioned are rejected by virtue of their dependence.

### ***Claim Interpretation***

18. In the interests of compact prosecution, examiner makes the following claim interpretations in order to apply prior art to the claims. See *Ex parte Ionescu*, 222 USPQ 537 (Bd. Pat. App. & Inter. 1984).

19. Regarding claims 1 and 17, the phrase "may be" is interpreted as "is".

20. Regarding claims 12 and 28, the phrase "may be" is interpreted as "is".

21. Regarding claim 6, the phrase "output signal" in line 5 is interpreted as "strobed output signal" as per page 4, lines 30-31.

22. Regarding claim 15, the limitations are interpreted as "A method as claimed in claim 1, wherein changes in at least one of said output signals are monitored at points



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internal to the circuit" according to examiner's understanding of the meaning of page 5, lines 14-17).

23. Examiner interprets that the intended limitation of claim 34 is the reduced model created by the method of claim 1 and has applied art although acknowledges that the interpretation is speculative.

***Claim Rejections - 35 USC § 101***

24. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

25. Claims 17, 18, 32, 33, and 34 rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

26. Regarding claim 17, it is noted that the preamble recites an apparatus for creating a model of a data processing apparatus, however the body of the claim fails to recite necessary hardware to make the apparatus tangible. As a result, the limitations claim functional descriptive material *per se* and are therefore nonstatutory. See MPEP § 2106(IV)(B)(1).

27. Regarding claim 18, the limitations recite a computer program *per se*, and are therefore nonstatutory. See MPEP § 2106(IV)(B)(1).

28. Regarding claim 32, it is noted that the preamble recites an apparatus for modeling a data processing apparatus, however the body of the claim fails to recite necessary hardware to make the apparatus tangible. As a result, the limitations claim

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functional descriptive material *per se* and are therefore nonstatutory. See MPEP § 2106(IV)(B)(1).

29. Regarding claim 33, the limitations recite a computer program *per se*, and are therefore nonstatutory. See MPEP § 2106(IV)(B)(1).

30. Regarding claim 34, the limitations recite a data abstraction not claimed as embodied in computer-readable media and is descriptive material *per se*. As a result, the claim is nonstatutory. See MPEP § 2106(IV)(B)(1).

31. To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. § 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

### ***Claim Rejections - 35 USC § 102***

32. Claims 1-5, 12-14, 16-21, 28-30, and 32-34 are rejected under 35 U.S.C. § 102(b) as being anticipated by Gupte et al., US Patent No. 5, 903, 475.

33. Regarding claim 1, Gupte et al. teaches a method for simulating circuits wherein  
the simulation performs a test sequence of data processing operations  
(column 2, lines 23-33),  
including simulation operation of both a subsystem under test and one or  
more surrounding circuits (column 2, lines 7-22; column 9, lines 22-  
34) where a system simulation is equivalent to testing a subsystem

under test in conjunction with the surrounding components that comprise the system,

recording input signals to and output signals from said subsystem circuit while performing said test sequence of data processing operations (column 2, lines 7-22; column 6, lines 53-64; column 9, lines 18-21),

using a representation of recorded input signals to form a reduced model to compare output signals with one or more predetermined characteristics indicative of correct operation (column 2, lines 7-22; column 6, lines 41-52),

whereby a subsystem under test and reduced model may be used to simulate the subsystem under test performing the test sequence of data processing operations without simulating operation of one or more surrounding circuits (column 2, lines 7-22; column 6, lines 41-64).

34. Regarding claim 2, Gupte et al. teaches the use of a configuration file including data specifying input signals, output signals, and bi-directional signals exchanged with the subsystem circuit in order to form the reduced model (column 8, line 44 – column 9, line 8)

35. Regarding claim 3, Gupte et al. teaches that signals from the subsystem are used to determine when bi-directional signals can be driven making allowance for variations in delays inherent in output loads (column 10, lines 11-17).

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36. Regarding claim 4, Gupte et al. teaches that the reduced model includes a rule having an output signal time window within which a change in said output signal to a predetermined output signal value should occur to be indicative of correct operation (column 8, line 44 – column 9, line 8).

37. Regarding claim 5, Gupte et al. teaches recording output signals from a subsystem circuit under test (column 8, line 44 – column 9, line 8). While Gupte et al. does not explicitly disclose that the output signals values are one of: high; low; changed; and high impedance, it is inherent that signals in a digital circuit are referred to by the values in the enumerated group or by equivalent terms. Therefore, by recording output signals, the invention of Gupte et al. records values which are one of: high; low; changed; and high impedance.

38. Regarding claim 12, Gupte et al. teaches that the full subsystem circuit model from which said input signals and said output signals are recorded may be different from that to which said input signals are subsequently replayed and from which output signals are subsequently analysed (column 2, lines 7-22; column 9, lines 22-34).

39. Regarding claim 13, Gupte et al. teaches that the full subsystem circuit model may change between different versions during regression testing (column 17, lines 14-25; column 18, lines 19-24).

40. Regarding claim 14, Gupte et al. teaches that the full subsystem circuit may change between being one of an RTL model, a netlist model, or other software views (column 9, lines 42-46; column 7, lines 36-40; column 7, lines 55-62; column 8, lines 6-17).

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41. Regarding claim 16, Gupte et al. teaches recording progress messages for replay during regression testing (column 9, line 58 – column 10, line 4). Statistics are presumed equivalent to progress messages.

42. Regarding claim 17, the limitations recite an apparatus which performs the method as recited by claim 1. As the invention of Gupte et al. is embodied in a computer (Fig. 2; column 4, lines 5-7), the limitations of claim 17 are rejected by reasoning similar to that used to reject the limitations of claim 1 above.

43. Regarding claim 18, the limitations recite a computer program product comprising a computer program for controlling a computer to perform a method as recited in claim 1. As the invention of Gupte et al. is embodied in a computer (Fig. 2; column 4, lines 5-7), the limitations of claim 18 are rejected by reasoning similar to that used to reject the limitations claim 1 above.

44. Regarding claims 19, 20-21, and 28-30, the limitations recite a method for modeling a data processing apparatus corresponding to the method for creating a model of a data processing apparatus as recited by claim 1 and further limited by claims 4-5 and 12-14. As the invention of Gupte et al. models a data processing apparatus (column 1, lines 62-65; column 2, lines 7-22), the limitations of claims 19, 20-21, and 28-30 are rejected by reasoning similar to that used to reject claims 1, 4-5, and 12-14 above.

45. Regarding claim 32, the limitations recite an apparatus for modeling a data processing apparatus corresponding to the apparatus for creating a model of a data processing apparatus as recited in claim 17. As the invention of Gupte et al. is

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embodied in a computer (Fig. 2; column 4, lines 5-7) and performs a simulation of the data processing apparatus (column 1, lines 62-65; column 2, lines 7-22) the limitations of claim 32 are rejected by reasoning similar to that used to reject the limitations of claim 17 above.

46. Regarding claim 33, the limitations recite a computer program product comprising a computer program controlling a computer to perform a method as claimed in claim 19. As the invention of Gupte et al. is embodied in a computer (Fig. 2; column 4, lines 5-7) the limitations of claim 33 are rejected by reasoning similar to that used to reject the limitations of claim 19 above.

47. Regarding claim 34, Gupte et al. teaches a reduced hardware model (column 2, lines 7-22; column 6, lines 53-64; column 9, lines 18-21).

### ***Claim Rejections - 35 USC § 103***

48. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

49. Claims 6-11 and 22-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gupte et al. as applied to claims 1 and 19 above.

50. Regarding claim 6, Gupte et al. does not teach using a strobe signal in the model to trigger sampling of a strobed output signal and verify the strobed output signal. However, Gupte et al. does disclose a strobe rule which samples selected signals at

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regular intervals and to compare the sampled values with known good values to verify that the output signal is correct (column 8, line 44 – column 9, line 8). The strobe rule of Gupte et al. provides the same functionality as the limitations recited in claim 6. It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the strobe rule of Gupte et al. to sample strobed output signals in response to a strobe signal in the model to simplify creating of the reduced model or to better facilitate the design of circuits which always involve strobe signals. Such a modification would preclude the generation of faulty reduced models that fail to properly sample the strobed signals. The combination could be achieved by a rule that defines the relationship between a strobe signal and one or more strobed signals, and the tolerances related to the strobe signal and sampling the strobed signals.

51. Regarding claim 7, Gupte et al. does not teach a rule that includes a strobe output signal time window. However, the combination made in the rejection of claim 6 above includes tolerances related to a strobe signal and sampling one or more strobed signals. It would be obvious to a person of ordinary skill in the art at the time of applicant's invention to define a time window within which a change in strobe output signal to match a predetermined strobe output signal value should occur as a tolerance related to the strobe signals.

52. Regarding claim 8, Gupte et al. does not teach a rule that includes a strobed output signal time window within which said strobed output signal should hold a predetermined strobed output signal value to be indicative of correct operation. However, the combination made in the rejection of claim 6 above includes tolerances

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related to a strobe signal and sampling one or more strobed signals. It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to define a time window within which a strobed output signal should hold a predetermined strobed output signal value to indicate correct operation as a tolerance related to sampling the strobed signals.

53. Regarding claim 9, Gupte et al. does not teach a strobed output signal time window that is non-symmetrically disposed about a time when said strobed output signal is sampled. However, the combination made in the rejection of claim 6 above includes tolerances related to a strobe signal and sampling one or more strobed signals. It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to define a time window that is non-symmetrically disposed about a time when said strobed output signal is sampled as a tolerance related to sampling the strobed signals.

54. Regarding claim 10, Gupte et al. does not teach a settling time window that is at least partially surrounded by a settling time window within which said strobed output signal is permitted to change. However, the combination made in the rejection of claim 6 above includes tolerances related to a strobe signal and sampling one or more strobed signals. It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to define a settling time window that is at least partially surrounded by a settling time window as a tolerance related to sampling the strobed signals.



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55. Regarding claim 11, Gupte et al. does not teach a settling time window that is at least partially surrounded by a settled time window within which said strobed output signal is not permitted to change. However, the combination made in the rejection of claim 6 above includes tolerances related to a strobe signal and sampling one or more strobed signals. It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to define a settling time window that is at least partially surrounded by a settled time window within which said strobed output signal is not permitted to change as a tolerance related to sampling the strobed signals.

56. Regarding claims 22-27, the limitations recite a method for modeling a data processing apparatus corresponding to the method for creating a model of a data processing apparatus as recited by claim 1 and further limited by claims 6-11. As the invention of Gupte et al. models a data processing apparatus (column 1, lines 62-65; column 2, lines 7-22), the limitations of claims 22-27 are rejected by reasoning similar to that used to reject claims 6-11 above.

57. Claims 15 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Gupte et al. as applied to claims 1 and 19 above, and further in view of Rostoker et al. US Patent No. 5,544,067.

58. Gupte et al. does not teach monitoring output signals other than at sampling points for that output signal. Rostoker et al. teaches monitoring output signals within the circuit diagrams (Fig. 19, references 1910, 1912, 1914, and 1916; column 11, lines 65-67; column 30, lines 47-60). It would have been obvious to a person of ordinary skill in

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the art at the time of applicant's invention to combine monitoring output signals within the circuit diagrams as in the invention of Rostoker et al. with the system simulation of Gupte et al. in order to better facilitate the designer's understanding of the internal operation of the subsystem circuit under test. The combination could be achieved by a rule which allows the designer to specify monitoring output signals within the subsystem circuit under test.

59. Regarding claim 31, the limitations recite a method for modeling a data processing apparatus corresponding to the method for creating a model of a data processing apparatus as recited by claim 1 and further limited by claim 15. As the invention of Gupte et al. models a data processing apparatus (column 1, lines 62-65; column 2, lines 7-22), the limitations of claims 31 are rejected by reasoning similar to that used to reject claim 15 above.

### ***Conclusion***

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (703) 305-0542 or (571) 272-3713 beginning in October 2004. The examiner can normally be reached on 8am-4pm M-F.

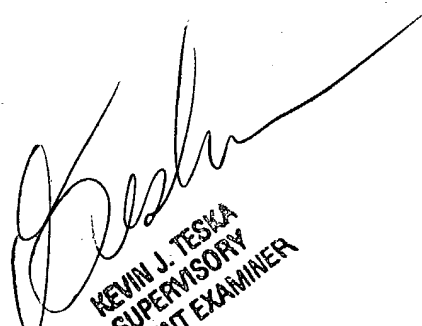
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (703) 305-9704 or (571) 272-3716 beginning in October 2004. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Proctor  
Examiner  
Art Unit 2123

jsp 9/28/2004



KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER